

**COMPLETE SET OF PENDING CLAIMS**

1 1.-29. (Cancelled)

1 30. (Currently Amended) A data structure storage method used by instruction  
2 ~~storing means~~ that stores a virtual machine instruction sequence generated by compiler to  
3 be executed by a virtual machine, the data structure including:

4 ~~wherein the storage method results in:~~

5 ~~the instruction storing means being~~ a plurality of instruction blocks that constitute  
6 the virtual machine instruction sequence, the instruction blocks corresponding to separate  
7 basic blocks and formatted for transmission;

8 the instruction blocks each including:

9 an identifier area for storing an identifier that specifies a start position of the  
10 instruction block ~~in the instruction storing means;~~

11 a non-branch instruction area for storing non-branch instructions belonging to a  
12 corresponding basic block;

13 a branch instruction area for storing at least one branch instruction belonging to  
14 the corresponding basic block; and

15 each branch instruction stored in the branch instruction area designating a branch  
16 destination using an identifier stored in one of the identifier areas.

1 31.-38. (Cancelled)

1 39. (Currently Amended) A data structure storage method used by instruction  
2 ~~storing means~~ that stores a virtual machine instruction sequence generated by compiler to  
3 be executed by a virtual machine, the data structure including:

4 ~~wherein the storage method results in:~~

5 ~~the instruction storing means being~~ a plurality of instruction blocks that constitute  
6 the virtual machine instruction sequence, the instruction blocks corresponding to separate  
7 basic blocks and formatted for transmission;

8 the instruction blocks each including,  
9 an identifier area for storing an identifier that specifies a start position of the  
10 instruction block ~~in the instruction storing means~~;

11 a non-branch instruction area for storing non-branch instructions belonging to the  
12 corresponding basic block; and

13 a branch instruction area for storing at least one branch instructions belonging to  
14 the corresponding basic block.

1 40. (Currently Amended) A data structure ~~storage method~~ of Claim 39,  
2 wherein the identifier of the instruction block is an address related information in  
3 the virtual machine instruction sequence.

1 41. (Currently Amended) A data structure ~~storage method~~ of Claim 40,  
2 wherein the address related information is one of absolute address, relative  
3 address, and offset address.

1 42. (Currently Amended) A data structure ~~storage method~~ Claim 40,  
2 wherein whether each virtual machine instruction is positioned at a start position  
3 of the basic block is indicated by an address in the virtual machine instruction sequence  
4 to which the virtual machine instruction is allocated;  
5 a virtual machine instruction at the start position of the basic block being  
6 allocated to a specific address in the virtual machine instruction sequence, and

7 a virtual machine instruction at other than the start position of the basic block  
8 being allocated to an address other than the specific address.

1 43. (Currently Amended) A data structure ~~storage method~~ of Claim 40,  
2 wherein virtual machine instructions of the virtual machine instruction sequence  
3 each comprises:

4 an identifying unit for storing identification information which indicates if the  
5 virtual machine instruction is positioned at a start position of the basic block; and  
6 an operation specifying unit for specifying an operation to be executed by the  
7 virtual machine.

1 44. (Currently Amended) A data structure ~~storage method~~ of Claim 40,  
2 further comprising:

3 ~~wherein the instruction storing means comprises:~~  
4 the basic blocks; and  
5 identification tags, each designates an address related information of the virtual  
6 machine instruction at a start position of the basic block; attachment of the tag indicating  
7 if the virtual machine instruction corresponding to the identification tag is positioned at  
8 the start position of the basic block.

1 45-51. (Cancelled)

1 52. (New) A virtual machine instruction sequence generated by compiler to  
2 be executed by a virtual machine, the improvement comprising:

3 a plurality of instruction blocks that constitute the virtual machine instruction  
4 sequence, the instruction blocks corresponding to basic blocks;

5 the instruction blocks each including:  
6 an identifier area for storing an identifier that specifies a start position of the  
7 instruction block;  
8 a non-branch instruction area for storing non-branch instructions belonging to a  
9 corresponding basic block;  
10 a branch instruction area for storing at least one branch instruction belonging to  
11 the corresponding basic block; and  
12 each branch instruction stored in the branch instruction area designating a branch  
13 destination using an identifier stored in one of the identifier areas,  
14 wherein the division of the virtual machine instruction sequence into a plurality of  
15 separately identifiable instruction blocks having a single branch instruction area reduces  
16 the amount of branch destination processing that would otherwise be necessary with a  
17 single instruction sequence with branch instructions throughout.

1 53. (New) A virtual machine instruction sequence generated by compiler to  
2 be executed by a virtual machine, the improvement comprising:  
3 a plurality of instruction blocks that constitute the virtual machine instruction  
4 sequence, the instruction blocks corresponding to basic blocks;  
5 the instruction blocks each including:  
6 an identifier area for storing an identifier that specifies a start position of the  
7 instruction block;  
8 a non-branch instruction area for storing non-branch instructions belonging to a  
9 corresponding basic block;  
10 a branch instruction area for storing at least one branch instruction belonging to  
11 the corresponding basic block; and

~~12~~ each branch instruction stored in the branch instruction area designating a branch  
~~13~~ destination using an identifier stored in one of the identifier areas,  
~~14~~ wherein the virtual machine instruction sequence is transmitted after being  
~~15~~ divided into the plurality of instruction blocks.

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